

### **REMARKS**

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 14-26 are presently active in this case. The present Amendment amends Claims 14-17, 21-22, and 25-26 without introducing any new matter.

The outstanding Office Action rejected Claims 14-26 under 35 U.S.C. § 103(a) as unpatentable over Saia (German Patent No. DE 29,609,570) in view of Tanahashi (U.S. Patent No. 5,460,244).

To clarify certain features, and to better comply with U.S. claim drafting practice, Claims 14-17, 21-22, and 25-26 are amended. In particular, Applicants' Claim 14 is amended to recite a step of "measuring a sum of currents circulating in each of N phases of a gear motor." Because the changes are merely formal in nature, it is believed that no new matter has been added.

In response to the rejection of Claims 14-26 under 35 U.S.C. § 103(a), Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

Briefly summarizing, Applicants' Claim 14 is directed to a method for detecting an end stop of a synchronous multi-phase gear motor operated in a stepped mode. The method includes the steps of: measuring a sum of currents circulating in each of N phases of a gear motor; and calculating an end-stop detection threshold relative to evolution of the sum of the currents measured in said step of measuring.

Turning now to the applied references, Saia is directed to a system configured to measure the drop of synchronism of a stepper motor or a synchronous motor, where differences in subsequent pulses can be measures. (Saia, p. 1, ll. 5-9.) Saia's system thereby measures currents of the motor, and compares a difference in amplitude of two subsequent

pulses. (Saia, p. 3, l. 23, to p. 4, l. 6.) However, and as confirmed by the pending Office Action, Saia fails to teach a *calculating an end-stop detection threshold relative to evolution of the sum of the currents* measured in said step of measuring, as required by Applicants' Claim 14. (December 19, 2007 Office Action, p. 2, ll. 9-12.)

The Office Action points to Tanahashi's Claim 2, and asserts that Tanahashi remedies the deficiencies of Saia to anticipate Applicants' Claim 14 features. In addition, the Office Action assumes that the combination of Saia and Tanahashi is proper. (Office Action, p. 2, ll. 13-16.) Applicants respectfully disagree with such contention.

Tanahashi is directed to a elevator speed control system having an induction motor 11 that is fed by parallel connected AC-DC inverters 5A, 5B, 8A, and 8B, that are connected in a back-to-back configuration by the means of storage capacitor 6. (Tanahashi, Abstract, Fig. 1.) Tanahashi controls the speed of the motor by suppressing the circulating current flowing through the parallel connected inverters 5A, 5B, 8A, 8B. (Tanahashi, col. 2, ll. 7-11, ll. 23-26.) Each phase current of the motor is measured with detectors 20A, 20B. (Tanahashi, col. 3, ll. 22-27.)

However, Tanahashi fails to teach a *calculating an end-stop detection threshold relative to evolution of the sum of the currents* measured in said step of measuring, as required by Applicants' Claim 14. Tanahashi merely explains that the inverter's operation may be stopped, when the currents of each phase exceed a predetermined threshold value. (Tanahashi, col. 2, ll. 35-40, col. 7, l. 25, to col. 8, l. 5.) Tanahashi also details that the predetermined threshold is calculated based on a predetermined value  $\theta_N$  of a phase difference. (Tanahashi, col. 6, ll. 47-63.) In Tanahashi, there is clearly no calculation of an end-stop detection threshold *relative to the evolution of the sum of currents*. The threshold value is fixedly pre-calculated based on a phase difference. In addition, Tanahashi does not measure the sum of currents.

Therefore, even if the combination of Saia and Tanahashi is assumed to be proper, the cited passages of the combination fails to teach every element of Applicants' Claim 14. Specifically, the combination fails to teach the claimed step of calculating. Accordingly, Applicants respectfully traverse, and request reconsideration of this rejection based on these references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 14-26 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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